Refrigeration

Technical Data

Industrial Condensing Units

EEDEN10-742

LRYEQ-AY1
LCBKQ3AV1

CONVENI-PACK

DAIKIN

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CONVENI-PACK

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LRYEQ-AY1 - LCBKQ3AV1

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1 Features

- Integrates high and low temperature refrigeration and air conditioning (including heating) into one system
- By using heat recovery, optimised controls and state of the art compressor technology, Conveni-pack can reduce annual energy consumption up to 50%, compared to conventional systems
- Lower associated CO2 emissions thanks to the heat pump technology
- Conveni-pack's modular design allows it to be used for smaller as well as larger shops
- The modularity of the Conveni-pack system maximises installation flexibility. Outdoor units can be grouped into blocks or rows, or distributed around the building, to meet individual installation constraints
- The heat extracted from the refrigeration showcases or evaporators can be re-used for comfort heating of the shop at no extra cost
- Low sound level including "night mode" operation
- A booster unit allows to connect freezer showcases or cold rooms to the Conveni-pack outdoor unit

INVERTER

2 Specifications

2-1 Technical Specifications					LRYEQ16AY1
Casing	Colour				Ivory white (Munsell code: 5Y7.5/1)
Dimensions	Unit	Height		mm	1,680
		Width		mm	1,240
		Depth		mm	765
Weight	Unit			kg	370
Heat exchanger	Type				Cross fin coil
Fan	Type				Propeller fan
	Quantity				2
	Air flow rate	Cooling	Nom.	m³/min	230
Fan motor	Output			W	750
	Drive				Direct drive
Compressor	Type				Hermetically sealed scroll compressor
	Piston displacement			m³/h	13.34
	Speed			rpm	6,300
	Output			W	2,500
	Starting method				Direct on line (inverter driven)
Compressor 2	Type				Hermetically sealed scroll compressor
	Piston displacement			m³/h	10.53
	Speed			rpm	2,900
	Output			W	3,600
	Starting method				Direct on line (inverter driven)
Compressor 3	Type				Hermetically sealed scroll compressor
	Piston displacement			m³/h	10.53
	Speed			rpm	2,900
	Output			W	4,500
	Starting method				Direct on line (inverter driven)
Operation range	Evaporator	Cooling	Min.	°CDB	-20 @ 0
			Max.	°CDB	10
Refrigerant	Type				R-410A
	Charge			kg	11.5
	Control				Electronic expansion valve
Refrigerant oil	Type				Daphne FVC68D
	Charged volume			l	1.7 (7) + 2.1 (8) + 2.1 (9) + 4.0 (10)
Safety devices					High pressure switch
					Fan driver overload protector
					Overcurrent relay
					Inverter overload protector
					Fusible plugs
					Earth leakage detector

2-1 Technical Specifications					LCBKQ3AV1
Cooling capacity	Nom.			kW	3.35 (1)
Casing	Colour				Ivory white (Munsell code: 5Y7.5/1)
Dimensions	Unit	Height		mm	480
		Width		mm	680
		Depth		mm	310
Weight	Unit			kg	47
Fan	Type				Propeller fan
	Air flow rate	Cooling	Nom.	m³/min	1.6
Compressor	Type				Hermetically sealed swing compressor
	Piston displacement			m³/h	10.16
	Output			W	1,300
	Starting method				Direct on line (inverter driven)
	Frequency ON/OFF				Less than 6 times/hour
Operation range	Evaporator	Cooling	Min.	ºCDB	-45
			Max.	ºCDB	-20
	Ambient temperature	Min.		ºC	-15
		Max.		ºC	43

2 Specifications

2-1 Technical Specifications				LCBKQ3AV1
Refrigerant	Type			R-410A
	Control			Electronic expansion valve
Refrigerant oil	Type			Daphne FVC50K + FVC68D
	Charged volume		l	0.85 \<br /\> 0.5
Piping connections	Suction	Super heat	K	10K or more
Safety devices	Item	01		High pressure switch
		02		Inverter overload protector
Minimum connection load	Indoor unit		kW	0.43

2-2 Electrical Specifications			LRYEQ16AY1
Power supply	Phase		3~
	Frequency	Hz	50
	Voltage	V	380-415
Voltage range	Min.	%	-10
	Max.	%	10

2-2 Electrical Specifications				LCBKQ3AV1
Power supply	Phase			1~
	Frequency		Hz	50
	Frequency range	Min.	%	-2
		Max.	%	2
	Voltage		V	220-240
	Unbalanced load	Min.	%	-2
		Max.	%	2
Voltage range	Min.		%	-10
	Max.		%	10

3 Electrical data

3 - 1 Electrical Data

LRYEQ16AY1

Model name	Units				Power supply			Comp.		OFM		Minimum Ssc value (kVA)	Z Max. (Ω)
	Hz	Volts	Min.	Max.	MCA	TOCA	MFA	MSC	RLA	kW	FLA		
LRYEQ16AY1(E)	50	380	342	456	35.2	48.3	40	89	10.8+11.1X2	0.75x2	0.7X2	1038	0.24
		400						84	10.4+10.4X2				
		415						81	9.9+10.1X2				
LCBKQ3AV1(E)	50	220	198	264	15.0	15.0	20	—	14.1	—	0.06	EN61000-3-2: Professional equipment	Equipment complying with EN61000-3-3
		240											

NOTES

1 RLA is based on the following conditions:
LRYEQ16AY1 (E)
- Outdoor temperature 32°C DB
- Suction SH 10K
- Saturated temperature equivalent to suction pressure -10°C

LCBKQ3AV1(E)
- Saturated temperature equivalent to discharge pressure -10°C
- Saturated temperature equivalent to suction pressure -35°C
- Suction SH 10K

2 TOCA means the total value of each OC set

3 MSC means the max. current during the starting of compressor.

4 Voltage range
Units are suitable for use on electrical systems where voltage supplied to unit terminal is not below or above listed range limits.

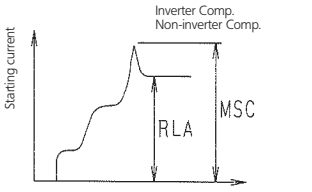
5 Maximum allowable voltage variation between phases is 2%

6 Select wire size based on the larger value of MCA or TOCA

7 MFA is used to select the circuit breaker and the ground fault circuit interrupter (earth leakage circuit breaker)

Symbols

MCA Min. Circuit Amps (A)
TOCA Total Over Current Amps (A)
MFA Max. Fuse Amps (A)
MSC Max. Starting Current
RLA Rated Load Amps (A)
OFM Outdoor Fan Motor
kW Rated motor output (kW)
FLA Full Load Amps (A)



The relationship between the starting time and the starting current

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4 Capacity tables

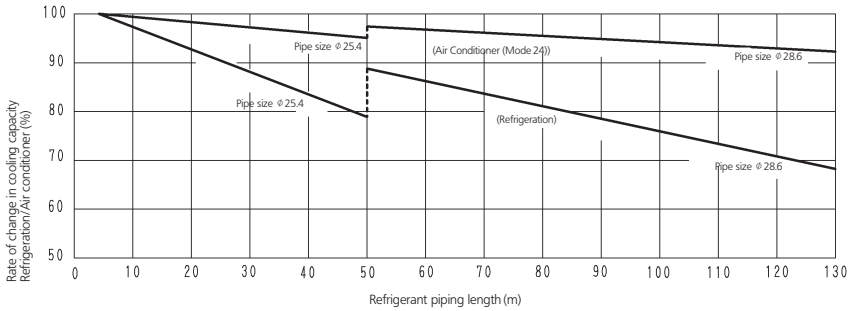
4 - 1 Cooling Capacity Tables

LRYEQ16AY1

(Symbol) Q: Cooling capacity
W: Power consumption

Model name	Operation mode	Operating frequency	Refrigeration / Air conditioner	Outdoor temperature	Evaporating temp. Range (°C)													
					-20		-15		-10		-5		0		5		10	
					Q	W	Q	W	Q	W	Q	W	Q	W	Q	W	Q	W
				°C DB	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
LRYEQ16AY1	Mode 24	50Hz	Refrigeration	20	19.1	10.1	21.7	10.2	24.5	10.3	27.0	10.4	29.5	10.4	31.8	10.5	34.6	10.5
			Air conditioner		16.0		15.5		15.8		15.7		15.6		15.4		15.3	
			Refrigeration	27	17.6	13.4	20.2	13.6	23.0	13.7	25.4	13.9	27.9	14.0	30.3	14.0	33.0	14.1
			Air conditioner		15.1		14.5		14.8		14.7		14.6		14.5		14.4	
			Refrigeration	32	16.6	15.8	19.1	16.0	21.8	16.5	24.2	16.9	26.7	17.1	29.1	17.1	31.8	17.3
			Air conditioner		14.2		14.1		14.0		13.9		13.8		13.7		13.6	
			Refrigeration	38	13.6	17.2	16.1	17.5	18.5	18.2	19.3	17.9	20.2	17.9	20.7	17.3	21.3	16.9
			Air conditioner		13.6		13.5		13.4		13.3		13.2		13.1		13.0	
			Refrigeration	43	10.9	16.2	11.0	14.9	11.1	13.1	11.2	11.9	11.4	11.0	11.5	10.0	11.5	9.4
			Air conditioner		13.2		13.1		13.0		12.9		12.8		12.7		12.6	
	Mode 29	50Hz	Refrigeration	20	19.9	7.07	22.7	7.12	25.4	7.12	28.2	7.25	30.9	7.30	33.7	7.32	36.5	7.36
				27	18.6	8.20	21.3	8.34	24.0	8.48	26.7	8.61	29.4	8.72	32.1	8.83	34.8	8.90
				32	17.5	9.49	20.2	9.73	22.8	9.97	25.4	10.2	28.1	10.4	30.8	10.7	33.5	11.0
				38	16.2	10.5	18.7	10.8	21.2	11.1	23.8	11.5	26.3	11.8	28.9	12.2	31.5	12.7
				43	14.6	11.6	17.0	12.1	19.4	12.6	21.9	13.5	24.2	14.0	25.7	14.0	27.7	14.0

Rate of change in cooling capacity by piping length



Calculating method of cooling capacity
Cooling capacity = Reading value from cooling capacity table X Rate of change in cooling capacity by piping length

Notes:
1 □ Is specified point.
2 The condition of characteristics of the table
Suction 10K
Equivalent length (Piping) 5m
Level difference 0m
Indoor humidity (Gas injection line) RH95%
Indoor humidity
(Air conditioner (Cooling)) RH80%
3 Consider decrease of capacity depended on frosting, and time of defrosting, please select larger model (about 15%)

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4 Capacity tables

4 - 1 Cooling Capacity Tables

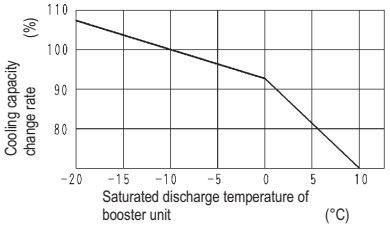
LCBKQ3AV1(E)

Cooling capacity characteristic

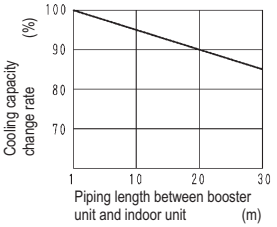
(sign) Q : cooling capacity
W : power consumption

Model	Outside temp.	Saturated suction temp. (°C)											
		-45		-40		-35		-30		-25		-20	
		Q	W	Q	W	Q	W	Q	W	Q	W	Q	W
	°C	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
LCBKQ3AV1 LCBKQ3AV1E	20 °C	1.85	1.53	2.45	1.60	3.35	1.68	4.12	2.01	5.27	2.34	6.62	2.75
	27 °C	1.85	1.53	2.45	1.60	3.35	1.68	4.12	2.01	5.27	2.34	6.62	2.75
	32 °C	1.85	1.53	2.45	1.60	3.35	1.68	4.12	2.01	5.27	2.34	6.62	2.75
	38 °C	1.77	1.53	2.28	1.60	3.11	1.68	3.85	2.01	4.95	2.34	6.25	2.75
	43 °C	1.72	1.53	2.19	1.60	2.95	1.68	3.69	2.01	4.76	2.34	6.04	2.75

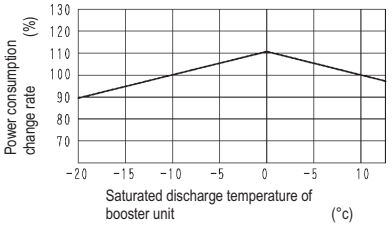
Cooling capacity change rate by saturated discharge temperature of booster unit (A)



Cooling capacity change rate by piping length between booster unit and indoor unit (B)



Power consumption change rate by saturated discharge temperature of booster unit



1. Method of calculating cooling capacity

Cooling capacity	=	Cooling capacity of calculated from cooling capacity characteristic	x	Cooling capacity change rate by saturated discharge temperature of booster unit (A)	x	Cooling capacity change rate by piping length (B)

2. Method of calculating power consumption

Power consumption	=	Power consumtion of calculated from cooling capacity characteristic	x	Power consumption change rate by saturated discharge temperature of booster unit

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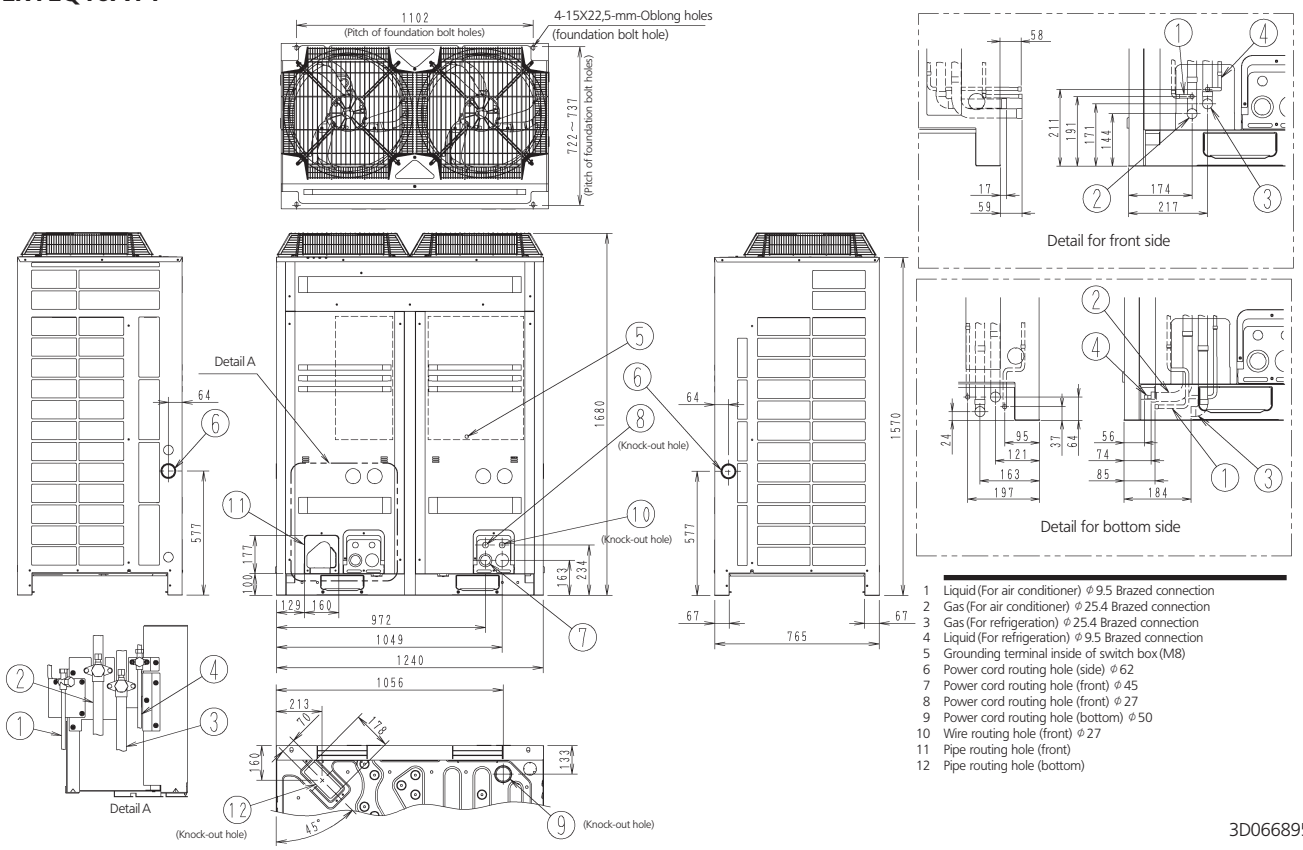
NOTES

1. ☐ is specified point.
2. The condition of characteristics of the table.
   - Saturated discharge temperature of booster unit ..... - 10 °C
   - Between booster unit and indoor unit ..... 1 m
   - Suction SH ..... 10 K
3. Consider decrease of capacity depended on frosting, and time of defresting, please select larger model (about 15%).

5 Dimensional drawings

5 - 1 Dimensional Drawings

LRYEQ16AY1



1 Liquid (For air conditioner) Φ9.5 Brazed connection
2 Gas (For air conditioner) Φ25.4 Brazed connection
3 Gas (For refrigeration) Φ25.4 Brazed connection
4 Liquid (For refrigeration) Φ9.5 Brazed connection
5 Grounding terminal inside of switch box (M8)
6 Power cord routing hole (side) Φ62
7 Power cord routing hole (front) Φ45
8 Power cord routing hole (front) Φ27
9 Power cord routing hole (bottom) Φ50
10 Wire routing hole (front) Φ27
11 Pipe routing hole (front)
12 Pipe routing hole (bottom)

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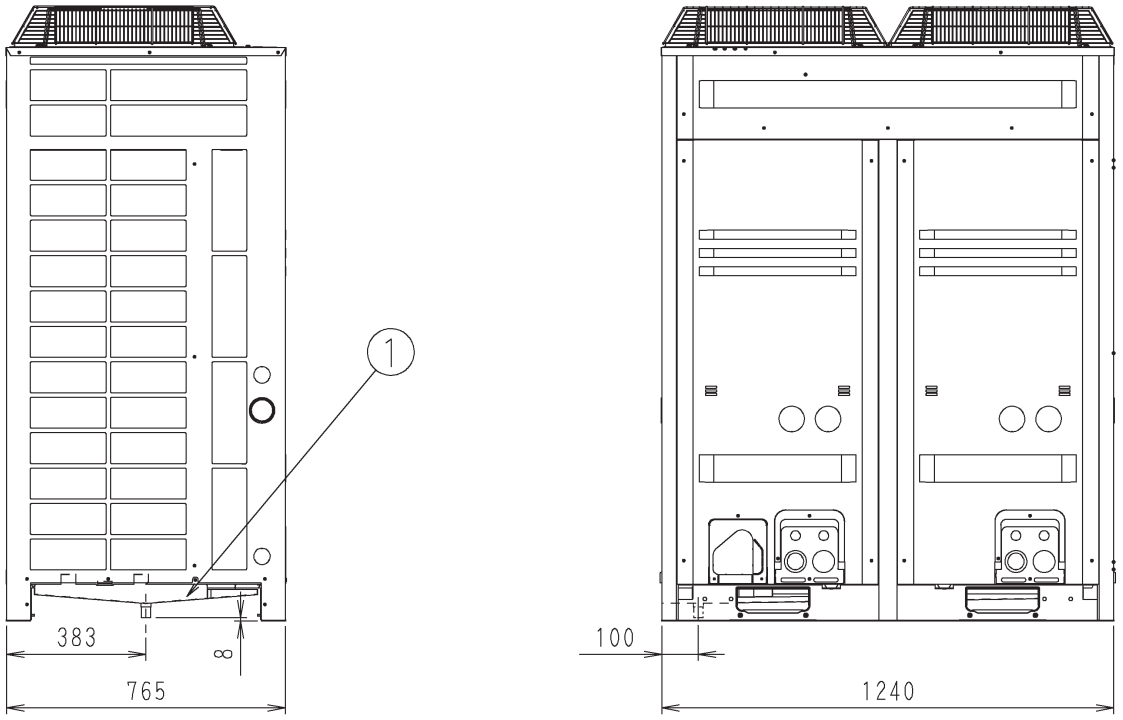
LRYEQ16AY1



MODEL
LRYEQ16AY1

1 Central drain pan kit KWC26C450(E)

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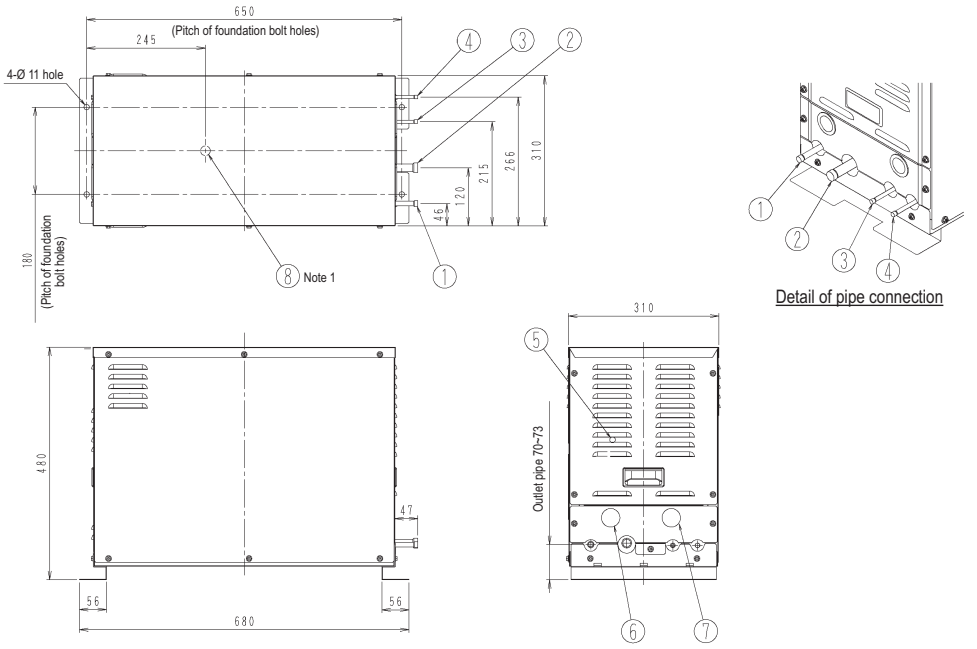
5 Dimensional drawings

5 - 1 Dimensional Drawings

LCBKQ3AV1(E)



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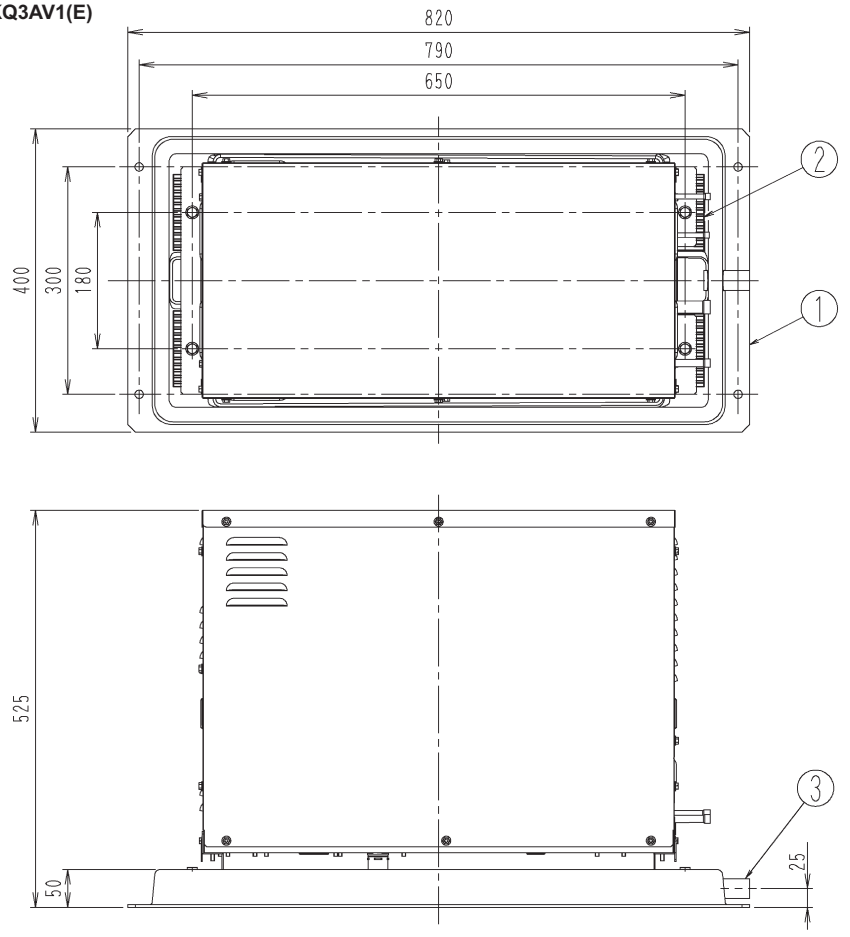
No.	Parts name	Remark
1	Gas pipe connection port (to outdoor unit)	Ø9.5 Brazing connection
2	Gas pipe connection port (to indoor unit)	Ø15.9 Brazing connection
3	Liquid pipe connection port (to indoor unit)	Ø6.4 Brazing connection
4	Liquid pipe connection port (to outdoor unit)	Ø6.4 Brazing connection
5	Grounding terminal	Inside of switch box (M5)
6	Power cord routing hole	Ø20
7	Wire routing hole	Ø20
8	Drain hole	Ø26

NOTE

1 Drain hole is in the bottom plate.
In the case of using drain hose, install the attached socket.

LCBKQ3AV1(E)



No.	Parts name	Remark
1	Drain pan	BWC63A2
2	Vibration isolating pad	
3	Drain hose connection port	JIS K6741 ø20

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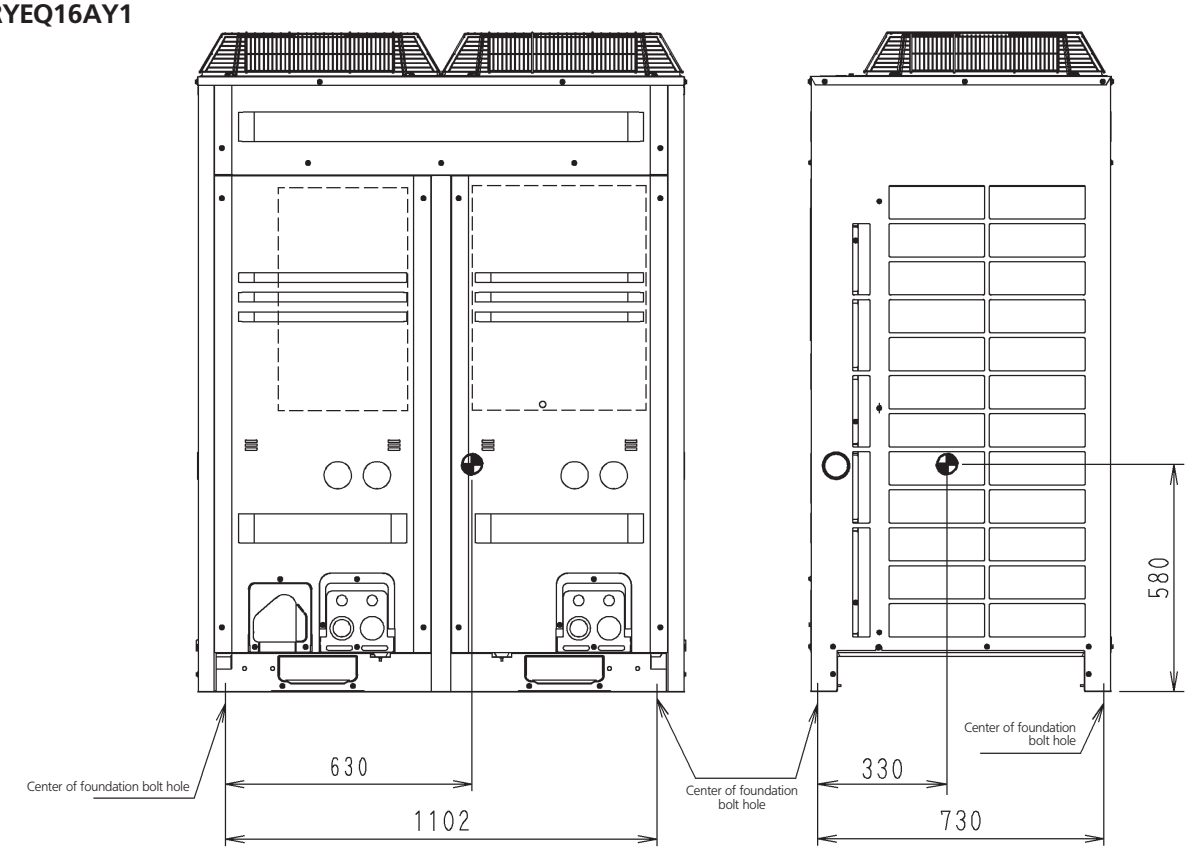
6 Centre of gravity

6 - 1 Centre of Gravity

LRYEQ16AY1



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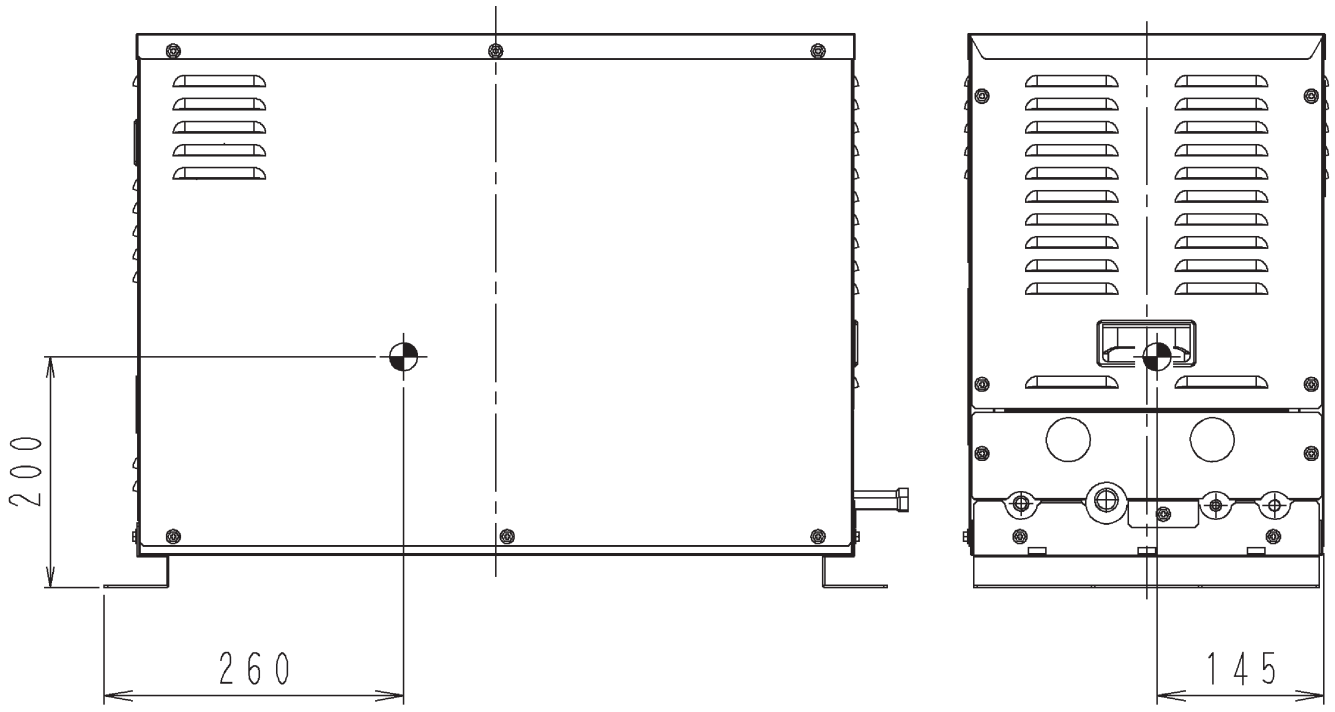
LCBKQ3AV1(E)



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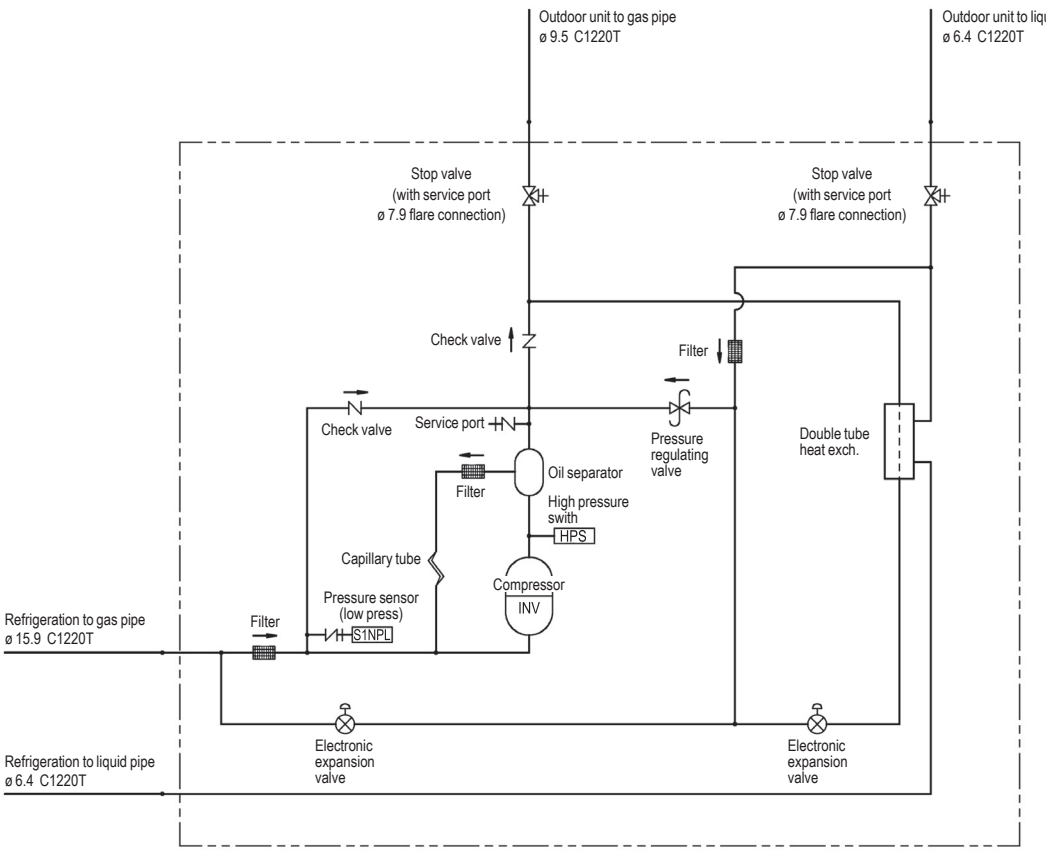
7 Piping diagram

7 - 1 Piping diagram

LCBKQ3AV1



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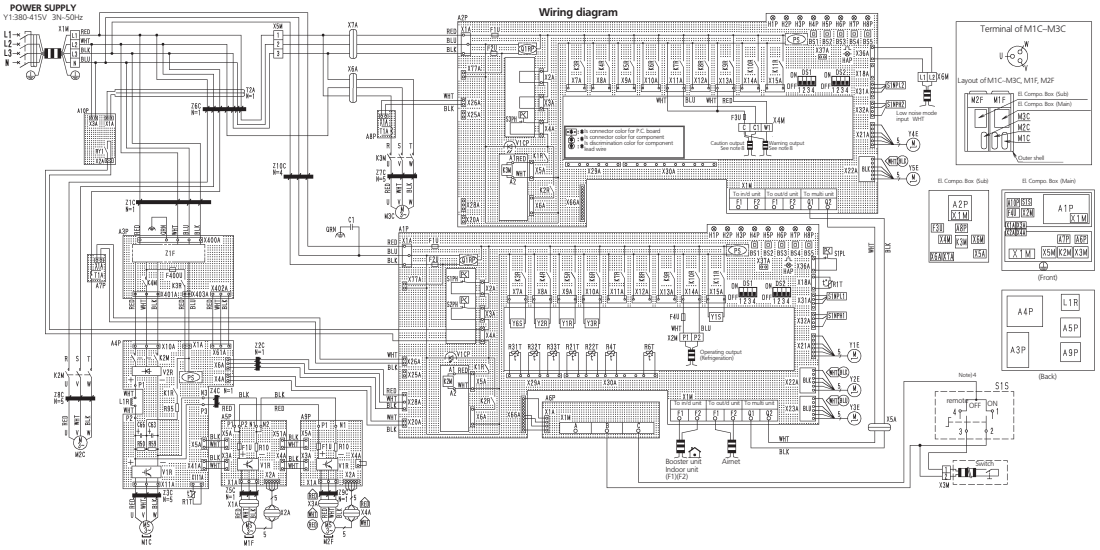
8 Wiring diagrams

8 - 1 Wiring Diagrams

LRYEQ16AY1



Notes:

1 This wiring diagram is applied only to the outdoor unit.
2 ■■■ : Field wiring
3 ▭▭ : Terminal strip ⊠ : Connector
⏚ : Protective earth (screw) ⊸ : Terminal
4 At the time of factory shipment, setting of "off", when operating, setting of "on" or "remote", the point of contact of the input must use the one for a slight current.
(for the remote switch, use non-voltage contact for microcurrent (Not more than 1mA DC12V))
5 RY1 point contact is open before turning on power supply
Refer to technical guide for the operation timing diagram
6 How to use (BS1-5) and (DS1-2) switch, refer to "service precaution" label on el. compo. box cover
7 When operating, don't shorcircuit the protection device (S1PH - S3PH, S1PL)
8 Be noted that the capacity of contact is AC220-240V, 110-120VA (Total of caution output, warning output)
9 Be noted that the capacity of contact is AC220-240V, 110-120VA (Operating output (Refrigeration))
10 Colors:
BLK = Black RED = Red WHT = White GRN = Green BLU = Blue

A1P	Printed circuit board (Main)
A2P	Printed circuit board (Sub)
A3P	Printed circuit board (Noise filter)
A4P	Printed circuit board (Inv. for comp)
A5P	Printed circuit board(Inv. for fan)
A6P	Printed circuit board (Power input) (Option)
A7P, A8P	Printed circuit board (current sensor)
A9P	Printed circuit board (Inv. for fan)
A10P	Printed circuit board (Earth leakage detector)
BS1~5	Push button switch (Mode, set, return, test, reset)
C1	Capacitor
DS1, DS2	Dip switch (A1P, A2P)
F1U, F2U	Fuse (T, 3.15A, 250V) (A1P, A2P)
F3U, F4U	Fuse (T, 1A, 250V) (A1P, A2P)
F1U	Fuse (BA, DC650V) (A5P, A9P)
F400	Fuse (T, 6.3A, 250V) (A3P)
H1P~8P	Pilot lamp (service monitor-orange) (H2P: Prepare, Test ——— : Flickering Malfunction Detection ·· : Light up

HAP	Pilotlamp (service monitor - green) (A1P, A2P)
V1CP	Safety devices input (A1P, A2P)
K2M, K4M	Magnetic contactor (M1C) (A2P,A4P)
K2M	Magnetic contactor (M3C) (A1P)
K3M	Magnetic contactor (M3C) (A2P)
K1R	Magnetic relay (K2M) (A1P)
K1R	Magnetic relay(K3M) (A2P)
K3R	Magnetic relay (Y6S) (A1P)
K4R	Magnetic relay (Y2R) (A1P)
K5R	Magnetic relay (Y1R) (A1P)
K6R	Magnetic relay (Y3R) (A1P)
K7R	Caution output (A2P)
K9R	Warning output (A2P)
K10R	Magnetic relay (Operating output) (A1P)
K11R	Magnetic relay (Y1S) (A1P)
RY1	Magnetic relay (A1P)
L1R	Reactor (A4P)
M1C	Motor (Compressor (Inv.))
M2C,M3C	Motor (Compressor (STD))

M1F,M2F	Motor (Fan)
PS	Switching power supply (A1P,A2P,A4P)
Q1RP	Phase reversal detect circuit (A1P,A2P)
R10	Resistor (current sensor) (A5P,A9P)
R50, R59	Resistor (A4P)
R95	Resistor (current limiting) (A4P)
R1T	Thermistor (air) (A1P)
R21T	Thermistor (Suction) (A1P)
R22T	Thermistor (Suction) (A1P)
R31T~R35T	Thermistor (M1C,M2C,M3C Discharge (A1P)
R4T	Thermistor (Middle inv.) (A1P)
R5T	Thermistor (Fin) (A1P)
S1MPH1	Pressure sensor (high) (A1P)
S1MPL1	Pressure sensor (Low) (A1P)
S1MPH2	Pressure sensor (middle) (A2P)
S1MPL2	Pressure sensor (Low) (A2P)
S1PH,S2P,H	Pressure switch (high) (A1P)
S2PH	Pressure sensor (high) (A2P)
S1PL	Pressure sensor (Low) (A1P)

S1S	Operation switch (Remote/OFF/ON)
T1A	current sensor (A1P,A6P)
T2A	current sensor (A10P)
V1R	Power module (A4P,A5P,A9P)
V2R	Diode bridge (A4P)
X1A~4A	Connector (M1F,M2F)
X5A	Connector (In-Out (Main-Sub))
X6A	Connector (Power supply)
X7A	Connector (Power supply)
X1M	Teminal strip (Power supply)
X1M	Teminal strip (Control) (A1P,A2P)
X1M	Teminal strip (Operating input) (A6P)
X2M	Teminal strip (Operating output)
X3M	Teminal strip (Remote switch)
X4M	Teminal strip (Warning output)
X5M	Teminal strip (Power supply)
X6M	Teminal strip (Low noise mode input)
Y1E	Electronic expansion valve (Main)
Y2E	Electronic expansion valve (Liquid)

Y3E	Electronic expansion valve (Oil (Inv))
Y4E	Electronic expansion valve (Oil (non1))
Y5E	Electronic expansion valve (Oil (non2))
Y1R	4 way valve (Main)
Y2R	4 way valve (Sub)
Y3R	4 way valve (Suction)
Y1S	Solenoid valve (Liquid)
Y6S	Solenoid valve (gas)
Z1C~10C	Noise filter (Ferrite core)
Z1F	Noise filter (with surge absorber) (A3P)

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8 Wiring diagrams

8 - 1 Wiring Diagrams

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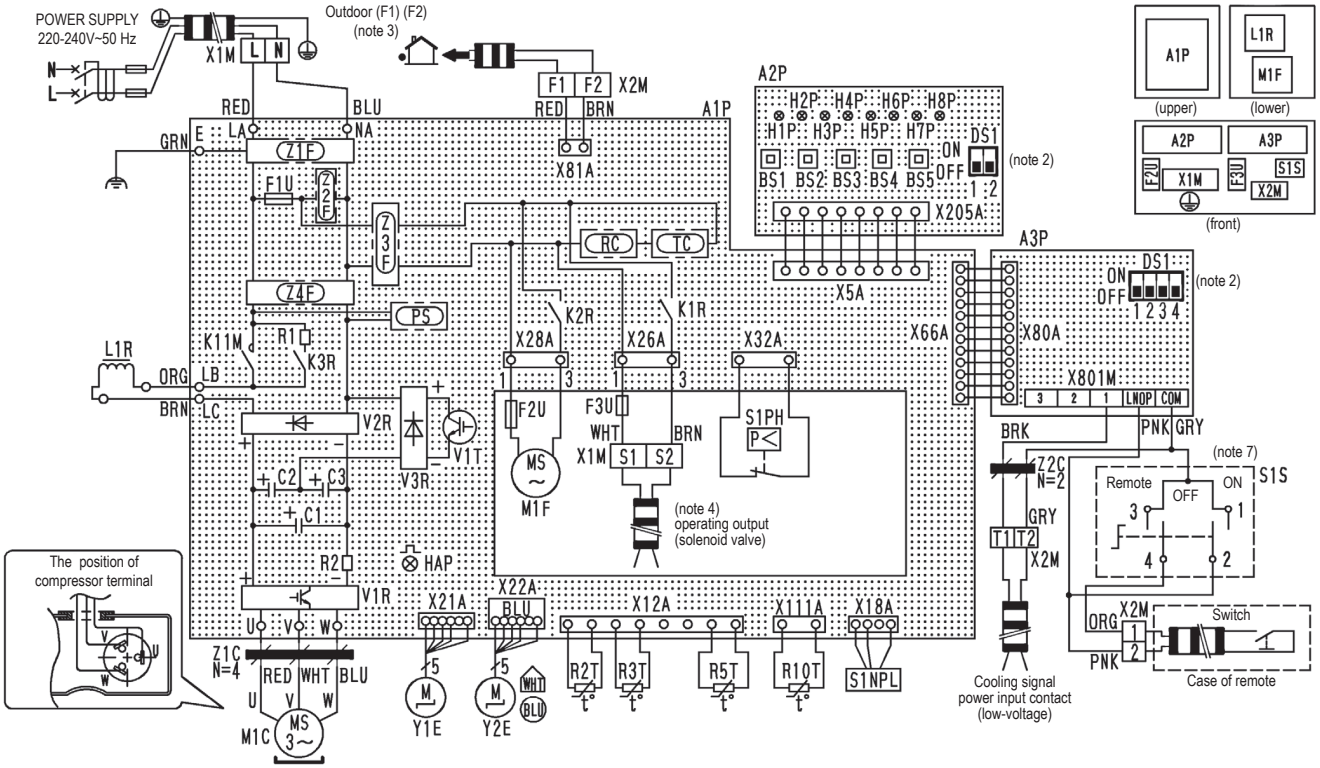

A1P	Printed circuit board	K11M	Magnetic contactor	TC	Signal transmission circuit
A2P	Printed circuit board	L1R	Reactor	V1R	Power module
A3P	Printed circuit board	M1C	Motor (compressor)	V2R, V3R	Diode bridge
BS1-BS5	Push button switch	M1F	Motor (fan)	V1T	IGBT
C1-C3	Capacitor	PS	Switching power supply	X1M, X2M	Terminal block
DS1	Dip switch (A2P, A3P)	R1, R2	Resistor	Y1E	Electric expansion valve
F1U	Fuse (T , 6,3A/250V)	R2T	Thermistor (suction)	Y2E	Electric expansion valve
F2U, F3U	Fuse (T , 1,0A/250V)	R3T	Thermistor (Hex inlet)	Z1C, Z2C	Noise filter (ferrite core)
HAP	Flashing lamp	R5T	Thermistor (Hex outlet)	Z1F-Z4F	Noise filter
	(service monitor green)	R10T	(Heat exchanger outlet)		
H1P-H8P	Pilot lamp		Thermistor (Fin)		
	(service monitor orange)	RC	Signal receiver circuit		
K1R	Magnetic relay	S1NPL	Pressure sensor		
K2R	Magnetic relay	S1PH	High pressure switch		
K3R	Magnetic relay	S1S	Operation switch (ON-OFF-remote)		

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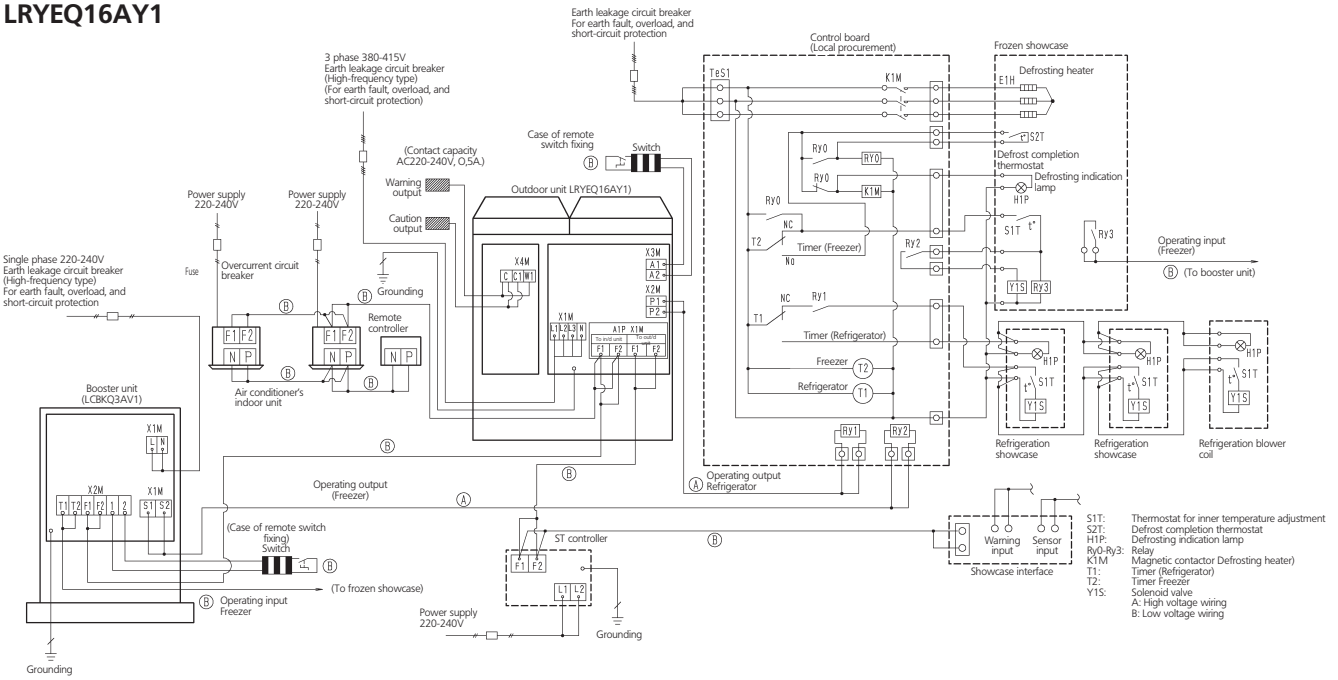
NOTES

1. : Field wiring : Terminal block : Connector : Terminal : Protective earth
2. The positions of the selector switches DS1(A2P, A3P) indicate factory setting. Refer to the service manual in detail.
3. For connection wiring to indoor-outdoor transmission F1 ● F2, refer to the installation manual.
4. Be noted that the capacity of contact is AC220-240V, 100VA.
5. Colors BLK: black RED: red BLU: blue WHT: white PNK: pink YLW: Yellow BRN: brown GRY: gray GRN: green ORG: orange
6. When operating, don't shortcircuit the protection device (S1PH).
7. At the time of factory shipment, setting of "OFF" when operating, setting of "ON" or "REMOTE".
   The point of contact of the input must use the one for a slight currnet, (for the remote switch, use non-voltage contact for microcurrent (not more than 1mA DC12V))

9 External connection diagrams

9 - 1 External Connection Diagrams

LRYEQ16AY1



Note
1 All wiring, components and materials to be produced on the site must comply with the applicable local and national codes.
2 Use copper conductors only.
3 As for details, see wiring diagram.
4 Install a circuit breaker for safety.
5 All field wiring and components must be provided by a licensed electrician.
6 Unit shall be grounded in compliance with the applicable local and national codes
7 Wiring shown are general points-of-connection guides only and are not intended for or to include all details for a specific installation.
8 If there exists the possibility of reversed phase, lose phase, momentary blackout or the power goes on and off while the product is operating, attach a reversed phase protection circuit locally.
Running the product in reversed phase may break the compressor and other parts.
9 In case of used remote switch, use non-voltage contact for microcurrent (not more than 1mA, 12V DC)
10 Total capacity for caution, warning: AC 220-240V, 110-120VA.
Capacity for operation output: AC 220-240V, 110-120VA.
11 Must install earth leakage circuit breaker

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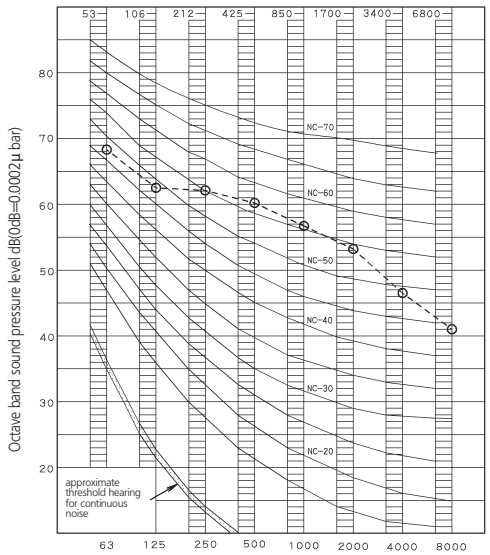
10 Sound data

10 - 1 Sound Pressure Spectrum

LRYEQ16AY1



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Overall (dB)

Scale	50Hz
A	62.0
C	71.0

(B,G,N is already rectified)

Measuring place

Anechoic chamber (conversion value)

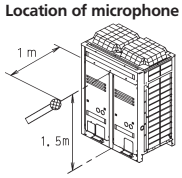
Note: The operating sound is measured in anechoic chamber, if it is measured under the actual installation conditions, it is normally over the set value due to enviromental noise and sound reflection.

Operating conditions

Power source: 380-415V 50Hz

JIS Standard

Location of microphone



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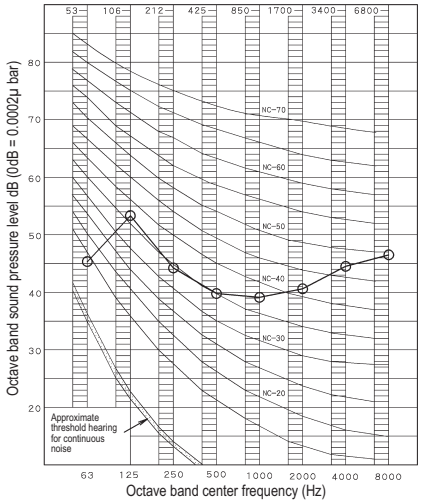

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NOTES

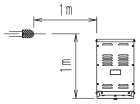
1 Over All (dB):
(B,G,N is already rectified)

Scale	(dB)
A	49
C	55

2 Operating conditions:
Power source: 220-240V 50Hz
Ambient temperature: 32 °C
Inv. compressor operation frequency: 246Hz

4 Measuring place: Anechoic chamber (conversion value). The operating sound is measured in anechoic chamber, if it is measured under the actual installation conditions, it is normally over the set value due to enviromental noise and sound reflection.

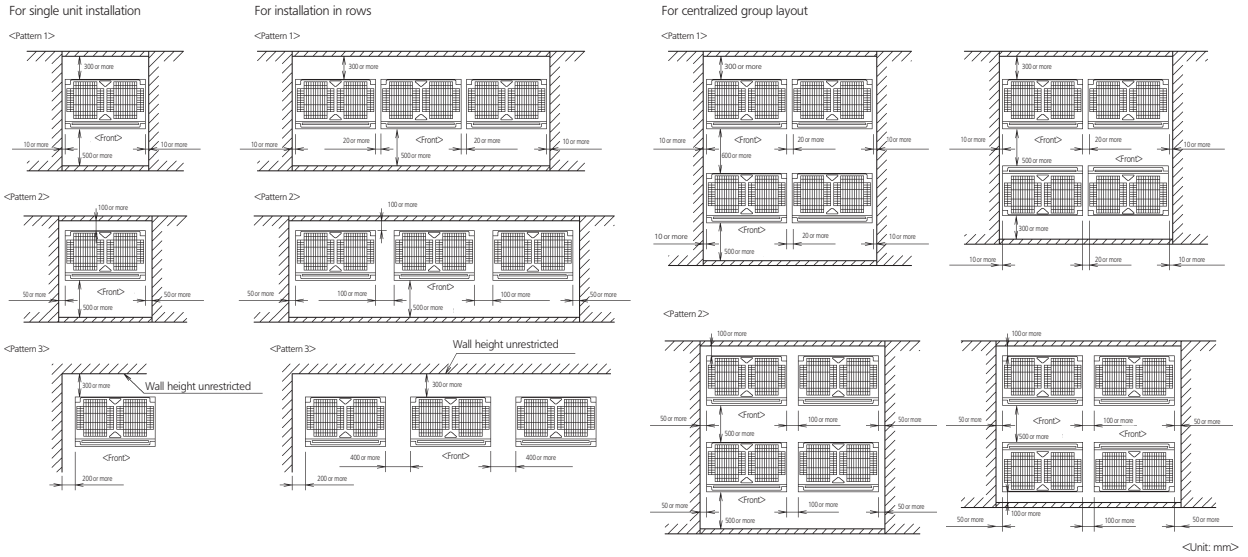
5 Location of microphone.



11 Installation

11 - 1 Installation Method

LRYEQ16AY1



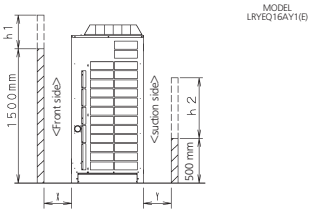
Notes:

1 Heights of walls in case of Patterns 1 and 2:
Front: 1500 mm
suction side: 500 mm
Side: Height unrestricted.
Installation space to be shown in this drawing is based on the cooling operation at 32 degrees outdoor air temperature.
When the design outdoor air temperature exceeds 32 degrees or the load exceeds maximum ability because of much generation load of heat in all outdoor unit, take the suction side space more broadly than the space to be shown in this drawing.

2 If the above wall heights are exceeded then h1/2 and h2/2 should be added to the front and suction side service spaces respectively as shown in the figure on the right.
h1=A (Actual height) - 1500
h2=B (Actual height) - 500
x=500+h1/2 or over
Y=300+h2/2 or over
(Y=100+h2/2 or over)
[Values in parentheses are for pattern 2]

3 When installing the units most appropriate pattern should be selected from those shown above in order to obtain the best fit in the space available always bearing in mind the need to leave enough space for a person to pass between units and wall and for the air to circulate freely.
(If more units are to be installed than are catered for in the above patterns your layout should take account of the possibility of short circuits.)

4 The units should be installed to leave sufficient space at the front for the on site refrigerant piping work to be carried out comfortably.



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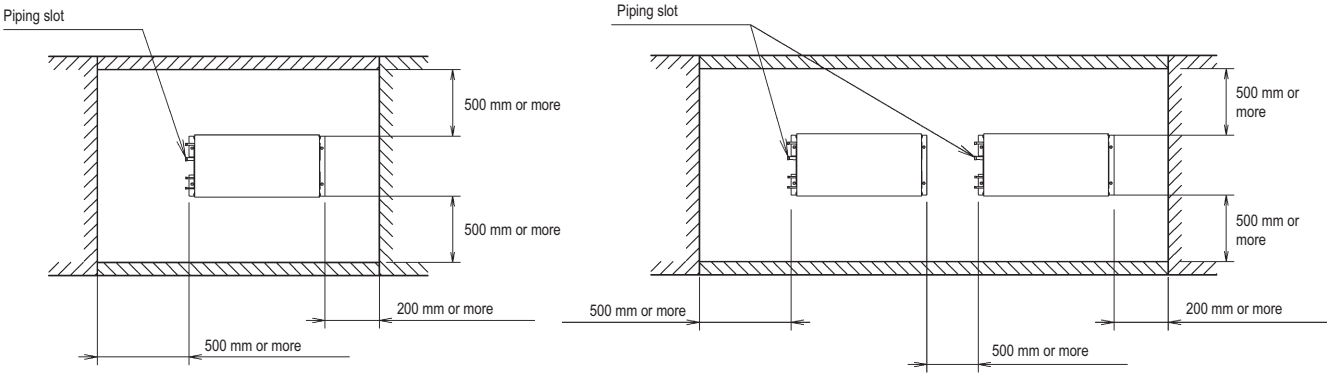
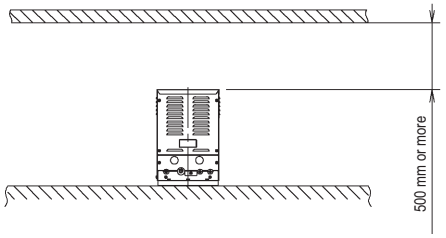
LCBKQ3AV1(E)





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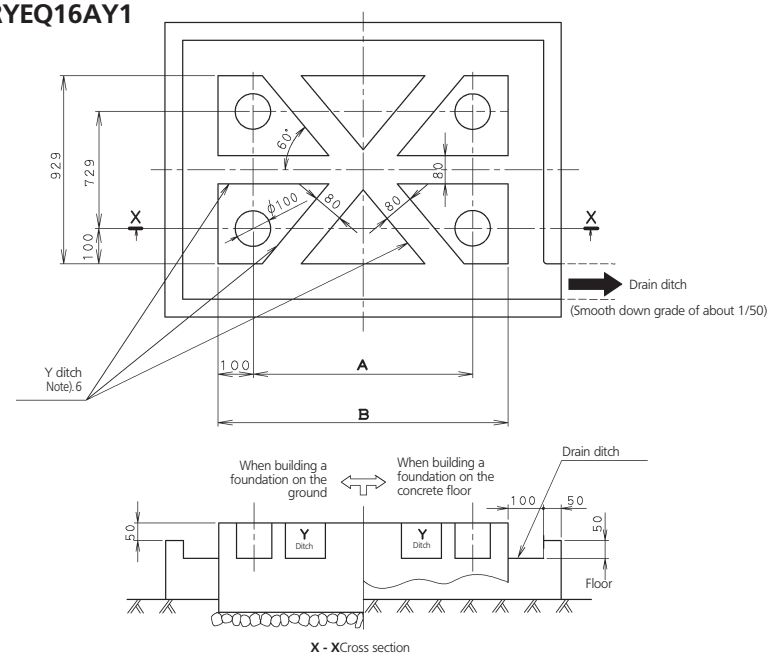
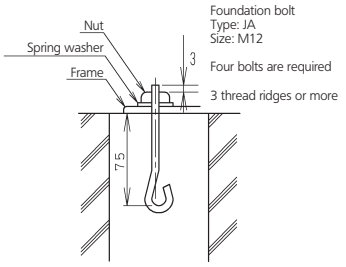
11 Installation

11 - 2 Fixation and Foundation of Units

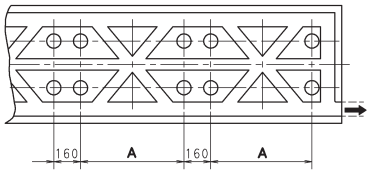
LRYEQ16AY1



X - X Cross section



Foundation bolt executing method



When installing multiple units in connection

Model	A	B
LREQ16AY1(E)	1102	1302

NOTES

1 The proportions of cement: sand: gravel for the concrete shall be 1:2:4, and the reinforcement bars that their diameter are 10mm, (approx. 300mm intervals) shall be placed.
2 The surface shall be finished with mortar. The corner edges shall be chamfered.
3 When the foundation is built on a concrete floor, rubble is not necessary. However, the surface of the section on which the foundation is built shall have rough finish.
4 A drain ditch shall be made around the foundation to thoroughly drain water from the equipment installation area.
5 When installing the equipment on a roof, the floor strength shall be checked, and water-proofing measures shall be taken.
6 Y ditch is not necessary for the following model. LRMEQ5AY1(E), LRMEQ6AY1(E), LRLEQ5AY1(E), LRLEQ6AY1(E)

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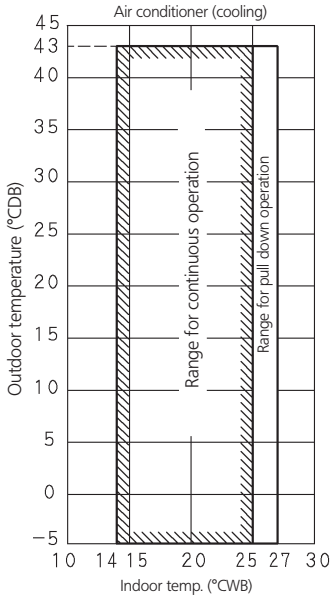
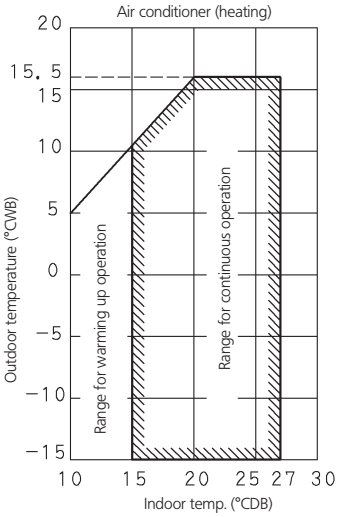
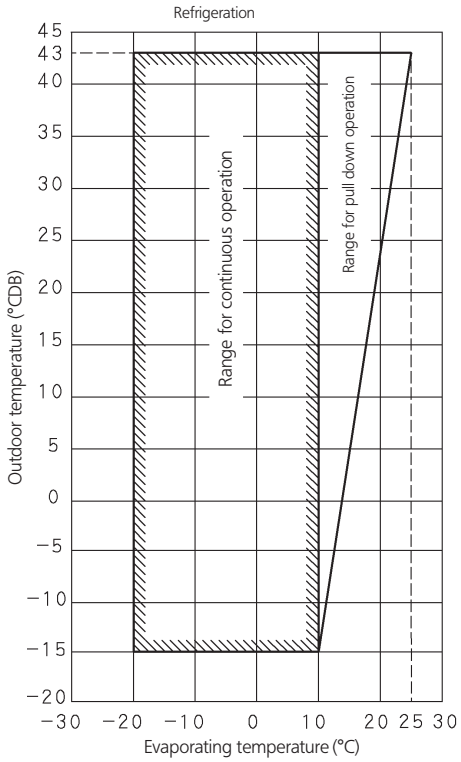
12 Operation range

12 - 1 Operation Range

LRYEQ16AY1







NOTES

1 Range for humidity (Air-conditioner (cooling))...RH80% or below
Range for humidity (Refrigeration)...RH95% or below

2 "Range for continuous operation" Shows possible range of continuous operation

3 "Range for pull-down operation" Shows possible range of short-time operation
- Do not select the model in the range for pull down operation
- To be more than 3°C/hour that the temperature of indoor unit drops, do not open the door and do not enter the goods in pull down operation as possible (Refrigeration)

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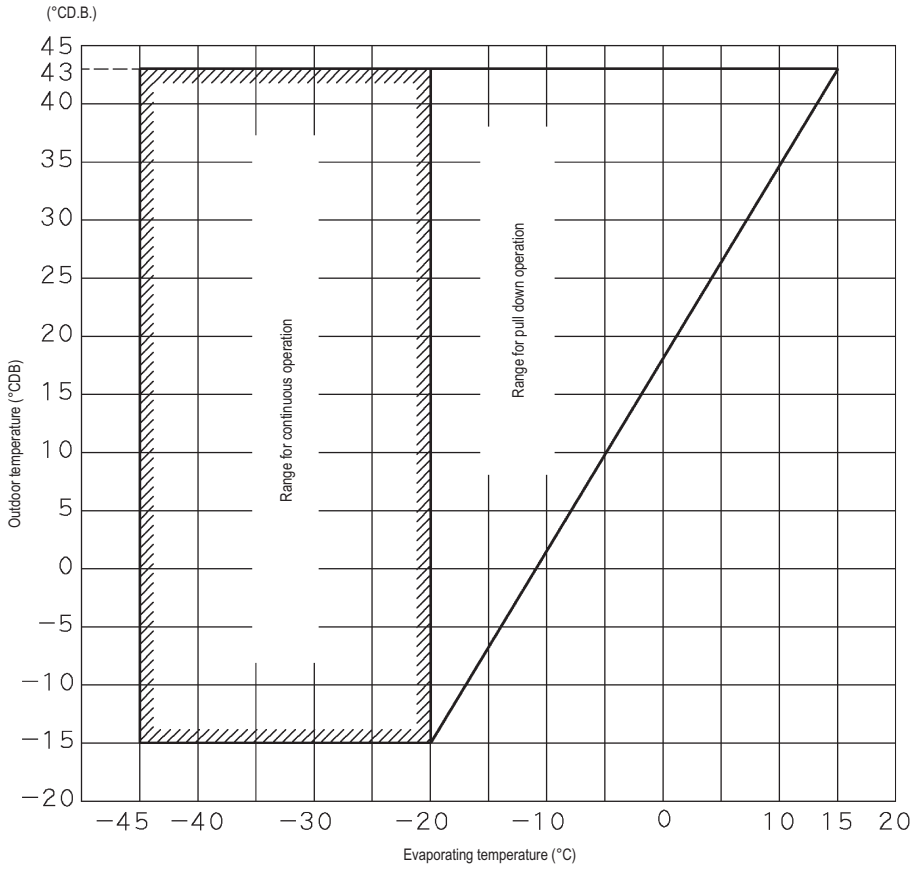
12 Operation range

12 - 1 Operation Range

LCBKQ3AV1(E)



NOTES

1. 'Range for continuous operation' shows possible range of continuous operation.
2. 'Range for pull down operation' shows possible range of short-time operation.
   - Do not select the model in the range for pull down operation.
   - To be more than 3 °C/hour that the temperature of indoor unit drops,
     Do not open the door and do not enter the goods in pull down operation as possible.

4D067032

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